**Amendments to the Drawings:**

Submitted herewith is a new sheet of drawings containing Fig. 1 as required by the Examiner in the Office Action dated February 20, 2007 (Paper No. 20070202).

Also submitted herewith is a replacement sheet of drawings containing Fig. 2 and an annotated sheet of drawings denoting the changes made.

## REMARKS

This is in response to the first Office Action mailed February 20, 2007. Claims 1-3 remain in the application for examination.

In the Office Action, the Examiner objected to the drawings as requiring a new drawing sheet showing the interrogator and the transponders. It is respectfully submitted that no drawing is necessary for a proper understanding of the invention. However, a block diagram has been provided to satisfy the Examiner. This block diagram is now new Fig. 1 and the original figure has been replaced and amended to identify it as Fig. 2.

The specification has been amended primarily to include the titles of the various parts of the application. Reference to the new drawing has been included.

Turning to the claim rejections, claim 1 was rejected as anticipated under 35 U.S.C. §102(b) as unpatentable over the Hurta et al. patent No. 5,809,142. The two dependent claims were rejected as unpatentable for obviousness over the Hurta et al. patent, in view of the Granovsky patent No. 5,276,430. Reconsideration is respectfully requested.

The Hurta et al. patent discloses a method and system for calculating a user account balance in a RF-ID system. The advantage of increased flexibility in changes to equations and methods of calculating revised account balances is achieved. The account balance is stored on a transponder and changes thereto are calculated in an interrogator. The interrogation signal is passed from a detector on the one hand through a lowpass filter to a threshold detector, whose output is an input to a digital ASIC and to a wake-up circuit, and, on the other hand, through a highpass filter to the digital ASIC. Upon reception of an electric field strength exceeding a threshold value, a stage two of the wake-up circuit is awakened. It then monitors the received signal for a pre-selectedly

modulated signal. When it is detected, the digital ASIC is activated and the pulse counter is kept active. A duration of the pulse counter activity is predetermined on the basis of the time interval between RF interrogation pulses. Thus, power consumption in the transponder is minimized.

The present invention compares the incoming AC signal in the interrogator to their 1st level to trigger an attack and to their 2nd level to find out whether a high signal value is no longer present and the decay can be started. By contrast, the Hurta patent compares a mean value of a signal detected in the transponder to a threshold value to wake-up an ASIC therein and then monitors the received signal for a certain modulation to activate the ASIC.

The two systems are completely different in their circuitries and tasks. Hurta et al. nowhere teaches about an attack (gain lowering) and a decay (gain rising). Indeed, Hurta et al. does not deal with AGC (automatic gain correction) function at all. The system described is a toll collection system comprising a reader and a tag. The function described is a wake-up detector in a tag and not an AGC function in the interrogator as disclosed in the present application. This wake-up detection system (in a tag) serves only to activate the rest of the tag system when the signal 'seen' by the tag antenna reaches a pre-terminated level. It does not control the receive signal level in the tag and has absolutely nothing to do with the interrogator receive signal.

Accordingly, the rejection of claim 1 as unpatentable over the Hurta et al. patent is completely unjustified. The Hurta et al. patent does not teach any aspect of the claimed invention, either explicitly or implicitly. Claim 1 is simply not anticipated by the Hurta et al. patent. Indeed, the Hurta et al. patent seems more remote from other references, including the Motorola reference discussed in the patent specification. (In this regard, a copy of the Motorola reference is enclosed to the extent it was not submitted with the international application.)

The Examiner's combination of Hurta et al. with the Granovsky patent is untenable. The Granovsky patent discloses a magnetic based security system using tags in the form of soft magnetic material. Such system does not use tags that respond to the interrogator request but only detect the presence of the tag by observing distortion in the transmitter signal. The incoming signal is not a tag replay modulation signal (as in the system of the present application) but the transmitter LF frequency detected by the receiver antenna. This means the receiving signal amplitude does not depend on the tag position, but on the coupling and strength of the transit signal. The system uses AGC, but in a different manner. The gain is set during the first window and kept the same for the entire surveillance cycle. The termination of the gain setting is not a problem for such systems since the incoming signal is its own transmit signal, so the time duration is known to the receiver part of the transmitter. This means that the system only needs to perform attack (in the first window) to set the gain and the gain setting is cleared at the end of surveillance cycle (which is known to the receiver). This is in contrast to the present solution which needs to detect the end of the tag signal by the use of the second comparison level and time delay function. The decay time of the signal is not defined in the Granovsky patent. The system is said to keep the gain constant for the entire time of surveillance cycle, which implies that the gain is reset (in an instance without decay) at the end of the cycle. The signal shape mentioned by the Examiner presents the transmit signal where the excitation is switched off and the antenna LC tank perform settling transient. It is not a representation of gain setting action in a receiver.

Thus, it is respectfully submitted that claims 1-3 are in condition for allowance.

The references cited by the Examiner apparently being of interest have been considered, but do not affect patentability. A few comments concerning U.S. Patent No. 6,122,331 and the Motorola disclosure as referenced in the patent specification is appropriate.

The technical solution as disclosed in U.S. Patent No. 6,122,331 is foreseen for continuous signals. For such signals it is rather obvious that a wait phase should be enforced first even when a change in the gain becomes necessary: a following time interval, in which the signal height is close to zero, is selected as a preferred gain transition region. Here the characteristics of pulsating signals in the form of wave packets – e. g. the disappearance of a signal when a wave packet has passed – cannot be exploited. The patent specification statement on this rather remote prior art solution (p. 3 para 1) has been amended to clearly point out the differences with regard to the technical solution of the invention.

Amendments to the patent specification have been made to once again explicitly stress that the MOTOROLA circuit MC 1490 activates an attack immediately when an overly high signal exceeding an attack threshold voltage level (Vatt) appears. It is evident that an AGC in said circuit has only two states, attack and decay. When said high signal appears, a capacitor Cx begins to be charged immediately (through a diode D1), the rate being high and determined by a resistor Rx. Since the voltage of the capacitor Cx controls the gain through a voltage follower, it is evident that **no** waiting time is provided and the attack begins immediately after the appearance of the high signal. In the present patent application this fact is stated in the preamble of claim 1 and clearly represented in window III of the Figure 2 showing two attack pulses being generated **immediately** after the voltage of two wave-packet signals shown in window II of the Figure exceeded the threshold level Vatt. A remark is necessary in this respect: by the description (page 6 line 20) attention is drawn to the fact that only the positive attack threshold voltage level Vatt is plotted in

the Figure 2. Hence, as far as the moment of the attack activation is concerned, no ambiguity is present in the patent application.

Further, the capacitor Cx in said MOTOROLA circuit is shunted by a 150 k resistor permanently discharging the capacitor Cx. Said discharging is negligible (Rx << 150 k) with respect to said charging as long as the signal voltage is high enough. As soon as the signal voltage drops, the state of said known circuit immediately changes from the attack to the decay since the capacitor Cx begins to be slowly discharged. The fact that the decay is made active *after the attack has ended* is also stated in the preamble of claim 1. Yet according to the invention, the decay is not made active immediately after the attack has ended. The moment of the decay activation according to the invention is defined by the characterizing portion of claim 1. Namely, the end of the wave-packet arrival is an appropriate distinctive physical feature to determine a moment from which on a waiting period may be measured. The end of the wave-packet arrival is proposed by the invention to be determined by means of an additional voltage level Vw: T*he amplifier responds with a decay activated after the lapse of a waiting period which started when the instantaneous amplified signal value for the last time after the end of the attack exceeded a waiting threshold voltage level Vw* (*cf.* windows II and IV of the Figure 2). The properties of the data wave packets are determined by the communication protocol. Herefrom *the length of the waiting period* is determined in claim 3 so that *the length of the waiting period equals a double length of the longest time interval between the adjacent pulses in a transponder data wave packet.* Thus, the proposed technical solution is new and non-obvious.

Thus, this application is now in condition for allowance. Should the Examiner have any questions after reviewing the Amendment, the Examiner is cordially invited to telephone the undersigned attorneys.

Respectfully submitted,

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